NATURAL AIR CIRCULATION WITH *Trane* CONCEALED CONVECTION HEATERS

A. I. A. File No. 30C41

NATURAL
AIR CIRCULATION
WITH
TRANE
CONCEALED CONVECTION HEATERS

FOR

HOMES

APARTMENTS

OFFICE BUILDINGS

INSTITUTIONS

HOTELS

THE TRANE COMPANY

LA CROSSE, WIS.

OFFICES IN ALL PRINCIPAL CITIES

Trane Research

THE REALIZATION OF AN IDEAL

ONE of the first ideals of The Trane Company at its inception, 45 years ago, was to institute and operate a Research Laboratory for learning the truth about its products and for the development of future ideas. We have never swerved from this ideal and as time went on we found that this department of our company became of increasing importance. New developments in the art and science of heating have been learned that have not been known or understood previously. New products have been developed and subjected to this most minute test before being placed upon the market. We must know absolutely that these products will do exactly what is claimed for them before offering them to the public.

One of the most important of the findings of the Trane Research Department is the Trane Convection Heater—a new and practical development in heating that actually makes the old-fashioned radiator obsolete. A heater that can be concealed in the wall but which gives more efficient, more comfortable, more healthful, more flexible heat. To Trane goes the achievement of developing this heater so that it may be installed with any vapor, steam or hot water heating system at a cost that is within the range of the old-fashioned cast-iron radiator.

Advantages

OF NATURAL AIR CIRCULATION HEATING

TRANE Concealed Convection Heaters are based on the principle of natural air circulation—a process by which air is brought into the heater at the floor, warmed to the proper degree and circulated gently into the room. In this way, the air of the room is warmed to just the right temperature for the best living condition. The same correct temperature pervades the entire room with a blanketing warmth that brings an entirely new standard of comfort.

You'll never know the ultimate of satisfaction in heating comfort until you have spent a few hours in a room heated by Trane Concealed Heaters.

Now for the first time it is practical and economical to conceal a heater in the wall—made possible by this great Trane development. Think what this means in harmonious interior decoration. Unsightly radiators, always the bane of the interior decorator, absolutely banished. All you see of the Trane Heater is a small inconspicuous grille below the window and an opening in the baseboard at the floor. When you walk into a room which contains Trane Heaters you are amazed at its appearance. Your first remark is to ask about the radiators. Surely this obstacle to room harmony cannot have been overcome so easily.

Yet it is so. The Trane Concealed Convection Heater makes obsolete all old-fashioned radiators and provides a method of concealing the heating equipment in the walls which gives better heat by natural air circulation. It is more healthful, more flexible and more economical heat.

Truly an epic advance in an everyday science that we would hardly have thought possible. A new advance in the art of heating that is not simply a radiator cover but a heater that replaces the radiator.

TEN ADVANTAGES OF TRANE CONCEALED CONVECTION HEATERS

1. *Natural Air Circulation*
2. *Concealed Heat*
3. *Instant Control of Heat*
4. *More Comfortable Heat*
5. *More Healthful Heat*
6. *Greater Cleanliness*
7. *Harmonious Interior Decoration*
8. *Increased Economy*
9. *Simple Installation*
10. *Easily Accessible*

Trane Convection Heater concealed in the wall behind a plaster front panel which is decorated in harmony with the interior

Instant Control of Heat

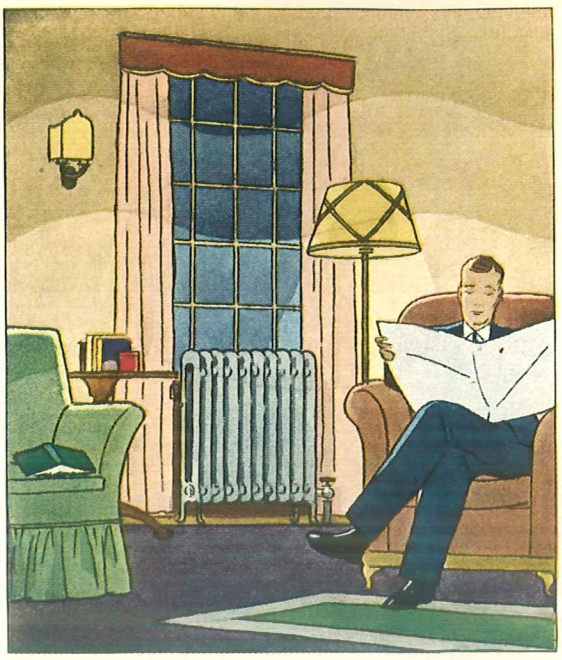
HAVE you ever come into your living room or office after an absence of a few hours and found that the heat had been turned on and that the room was unbearably hot? Of course you have. You immediately turn the radiator off and when the room does not cool, open a window wide in order to make the room livable. What happens? There is a sudden gust of wind or a continued draft. You are immediately subjected to colds because of the sudden change in temperature.

All this annoyance and possibility of sickness is avoided when you have Trane Concealed Heaters in your home or office. If the room is too hot, just turn a small knob and close the damper grille. This stops the flow of heat immediately and gives the room a chance to cool.

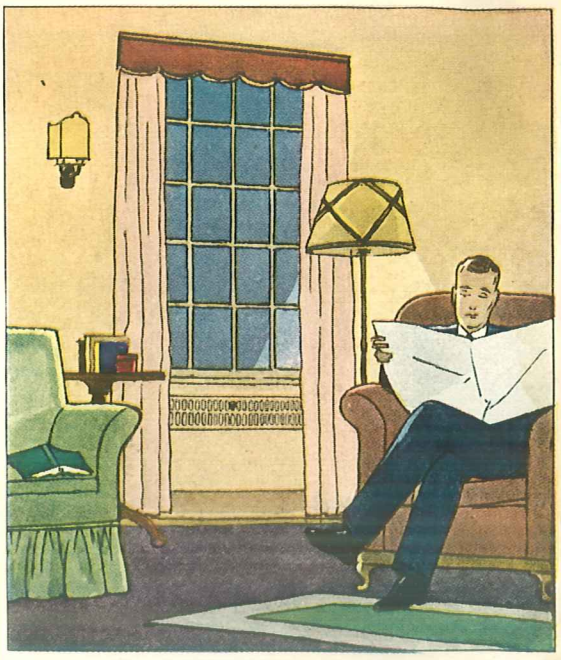
The same advantage is had when the room is too cold. Just open the grille damper and instantly a flow of warm air rushes out and starts to blanket the room with comforting warmth. You don't have to wait a long time for bulky radiators to warm.

With Trane Concealed Heaters you have instant control of heat when you want it.

When remodeling, the Trane Convection Heater may be placed in attractive cabinets which harmonize with interior decorations and do not detract from the pleasing arrangement of furnishings



Uneven, uncomfortable radiator heat insufferably hot at the breathing zone and cold at the floor with excessive drafts



Even, comfortable heat afforded by Trane Convection Heaters, practically the same temperature in entire living zone

More Comfortable Heat

HEAT which comes from Trane Concealed Convection Heaters is more comfortable because it is even heat. The temperature near the heater is practically the same as it is twenty feet away. For this is the very principle of natural air circulation heat.

Trane Heaters are scientifically designed so that they produce warmed air at exactly the correct temperature for natural air circulation of the greatest efficiency. Air is drawn in at the floor, warmed to the correct temperature to pass out and circulate across the room at the breathing line. Unlike the heat which comes from cast iron radiators, the heat from Trane Heaters does not rise to the ceiling readily because it is directed horizontally into the room. In fact the ceiling is hardly warmer than the air at the breathing line.

This you can prove by standing on a chair or ladder. With cast iron radiators you find the air at the ceiling insufferably hot—with Trane heat you can hardly tell the difference between breathing line and ceiling temperatures. Thus with even circulated heat, the room is devoid of the stuffiness which you have in a room heated by radiators. Trane Convected Heat is more comfortable heat.

The furniture in this dainty bedroom can be attractively arranged with Trane Convection Heaters concealed in the walls behind metal panels which are decorated exactly as the walls

More Healthful Heat

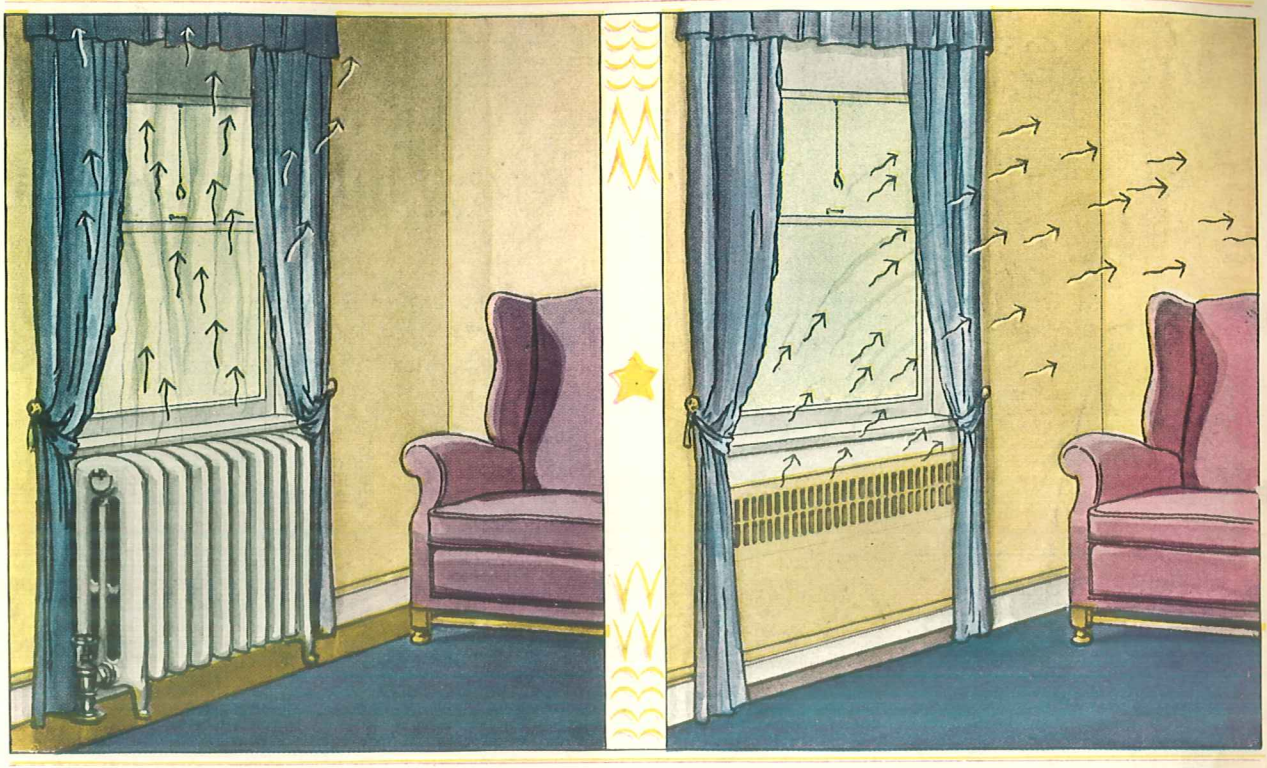
NATURAL Air Circulation Heat which is produced by Trane Convection Heaters is more healthful first because the temperature of the room is more even, and second, because there are no drafts. Children playing on the floor are not subjected to colds and coughs and are as comfortable and healthful as anyone in the room.

When Trane Engineers designed the Trane Heater this condition was of paramount importance. The temperature of the air at the floor, they said, must be practically the same as it is in the breathing zone which is about five feet above the floor. This is of utmost importance because children running around the house and becoming overheated should not sit on floors that are cold and drafty. This is a health menace long recognized by physicians.

Drafts on the floor and, in fact, throughout the room, are eliminated because it is not necessary to open windows to cool overheated rooms. Trane's instant control of heat takes care of that.

This is why Trane Convected Heat is more healthful for children and grown-ups, too.

In this charming Early American living room, the Trane Convection Heaters are concealed in the wall below the windows so that they do not detract from the beauty of the room



Old-fashioned radiators are catch-alls for dust which rises to soil curtains and walls

Dirty streaks are practically eliminated with the Trane Convection Heat

Greater Cleanliness

TRANE Convection Heaters are responsible for another considerable saving and the elimination of annoyance in their positive cleanliness. Curtains are not soiled as easily as when radiators are in use, and dirty streaks on walls and ceilings above the heat distributors are practically eliminated.

Old-fashioned radiators are perfect catch-alls for dust, and their construction makes it practically impossible to remove it. When they become heated, the dust rises on air currents and soils curtains, walls and ceiling. Trane elements, besides being out of the way and in a tight enclosure, are only a small fraction of the size of cast iron radiators and consequently, the dirt problem, which has always been present with older styles of heating, has been substantially eliminated.

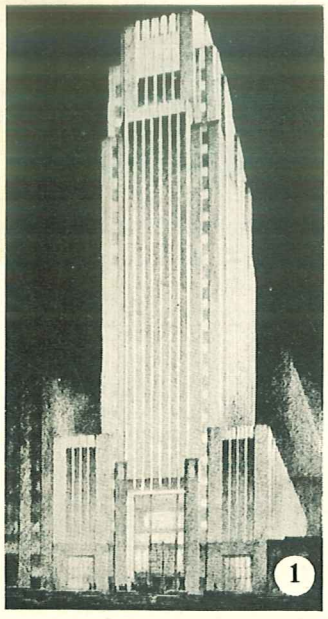
This greater cleanliness means less cleaning of curtains and draperies and less expense for painting and papering.

NATURAL AIR CIRCULATION WITH THE

A few typical Office Buildings,

Completely Equipped with TRA

2—Hotel Brownwood, Brownwood, Texas. *Architects:* Wyatt C. Hedrick, Inc., Fort Worth, Texas. *Heating Contractors:* J. C. Korioth Plumbing & Heating Company, Sherman, Texas. *General Contractors:* J. O. Everett Company, Dallas, Texas. 278 Trane Concealed Heater Units Installed



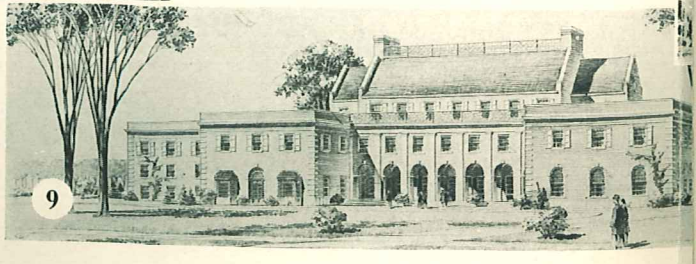
1—1616 Walnut Street, Philadelphia, Pa. Office Building. *Architects:* Tilden, Register & Pepper. *Engineer:* Charles S. Leopold. *Heating Contractors:* Keystone Heating & Equipment Company. *General Contractors:* Wark Company. 523 Trane Concealed Heater Units Installed

3—New Central Young Men's
ing, Akron, Ohio. *Architects:*
Engineer: John Paul Jones, Clev
Forbs-Stanford Company, Akr
Clemmer-Noah Construction Co
Concealed Heate

8—Doctors Building, Atlanta, Ga. *Architects:* Pringle & Smith, Atlanta, Ga. *Engineer:* Robert S. Newcomb, Atlanta, Ga. *Heating Contractors:* Stephenson Company, Inc., Atlanta, Ga. *General Contractors:* Southern Ferro Concrete Company, Atlanta, Ga. 412 Trane Concealed Heater Units Installed.

7—Francis Hotel, Monroe, La. *Architects:* Wyatt C. Hedrick, Inc., Fort Worth Tex. *Heating Contractors:* W. J. Riley Plumbing and Heating Company. *General Contractors:* Ashton Glassell Company, Shreveport, La. 350 Trane Concealed Heater Units Installed.

9—St. Elizabeth Hospital, Chicago, Ill. *Architects:* Hermann J. Gaul & Son. *Heating Contractors:* Glennon-Bielke Company. *General Contractors:* John Gebhardt & Son. 534 Trane Concealed Heater Units Installed.



Apartments, Homes, Institutions
NE CONVECTION HEATERS

s CHRISTIAN ASSOCIATION BUILD-
Good & Wagner, Akron, Ohio.
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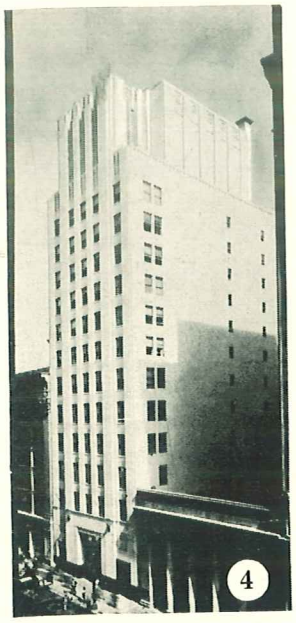
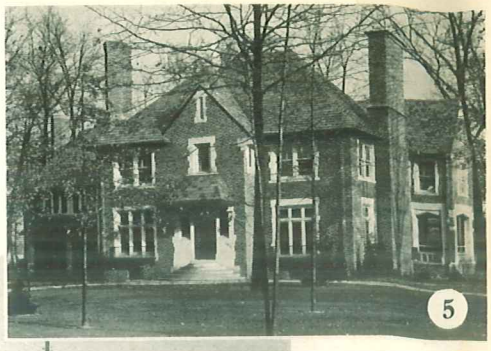
R UNITS INSTALLED.

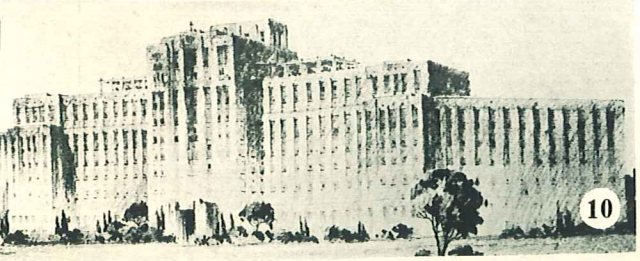


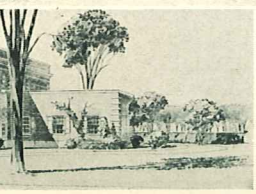
4—BANKS-HUNTLEY BUILDING, LOS ANGELES, CAL. *Architects:* John and Donald B. Parkinson. *Mechanical Engineer:* Ralph Phillips. *Heating Contractors:* F. D. Reed Plumbing Company. *General Contractors:* L. E. Dixon Company. 224 TRANE CONCEALED HEATER UNITS INSTALLED.

5—One of the exclusive homes in Palmer Woods, a suburb of Detroit equipped with Trane Convection Heaters.



6—Row of speculative homes at Alwood, N. J., equipped with Trane Convection Heaters.

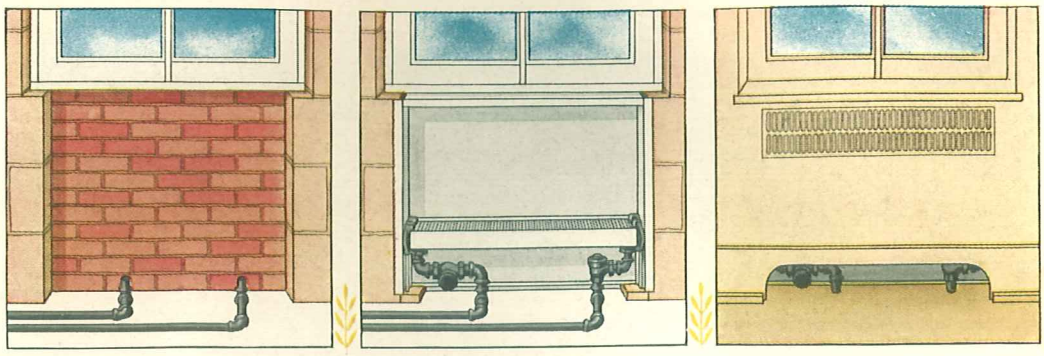




10—FORD AIRPORT HOTEL, DEARBORN, MICH. *Architects:* Albert Kahn, Inc.; *Heating Contractors:* H. Kelly and Company, Detroit. *General Contractors:* Martin Krausmann Co. 160 TRANE CONCEALED CONVECTION HEATERS INSTALLED.

11—NO. 1 EAST END AVENUE, NEW YORK, N. Y. APARTMENT BUILDING. *Architects:* Pennington & Lewis. *Heating Contractors:* E. Rutzler Company. *General Contractors:* James Stewart Company. 441 TRANE CONCEALED HEATER UNITS INSTALLED.

Trane Convection Heaters in the walls beneath the windows are in complete harmony with the exacting decorations of this delightful living room



Three Steps of installation of Trane Heaters in wall of brick building

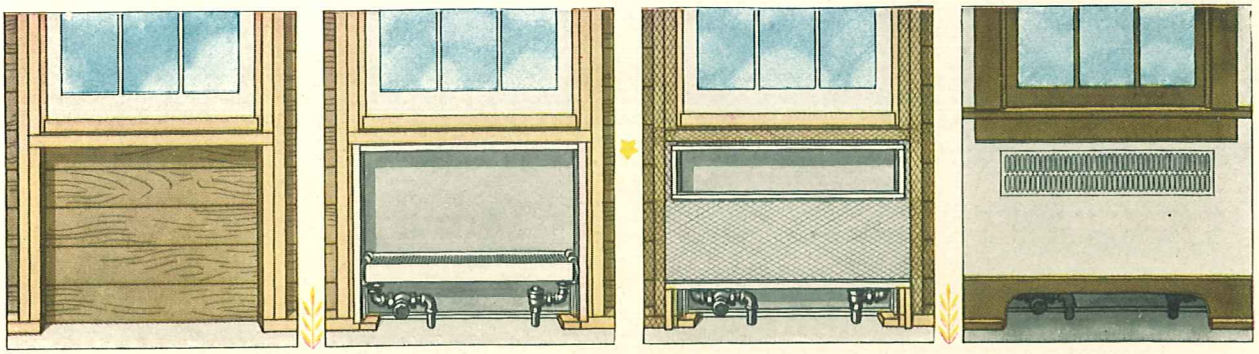
Simple Installation

IT is a simple matter to install Trane Concealed Convection Heaters in the walls when the building is being constructed. These heaters are designed to take the minimum of space and can be placed within the walls with only a slight change in the design to provide for a recess. They are available in a wide variety of sizes to fit *any* building installation. Piping is brought to the recess in the regular manner and the heater unit attached exactly as you would an old-fashioned radiator. If the front is to be plastered, metal lath is used, as shown below.

The plaster or metal fronts, which may be used, can be decorated to match the room interior.

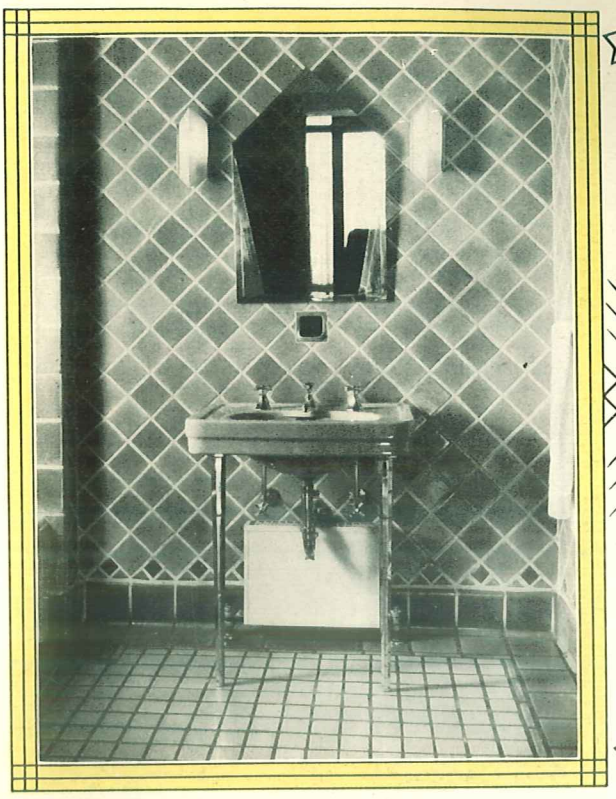
The Trane Heater is entirely concealed in the wall but easily accessible at all times. If it is not desired to place the Trane Heaters in the wall when building, or if you wish to install them when you remodel, they can be housed in cabinets as shown on pages 6, 18, and 19.

Even in this form Trane Convection Heaters have an appearance and harmony to interior decoration that is far superior to that of the old-fashioned radiator.

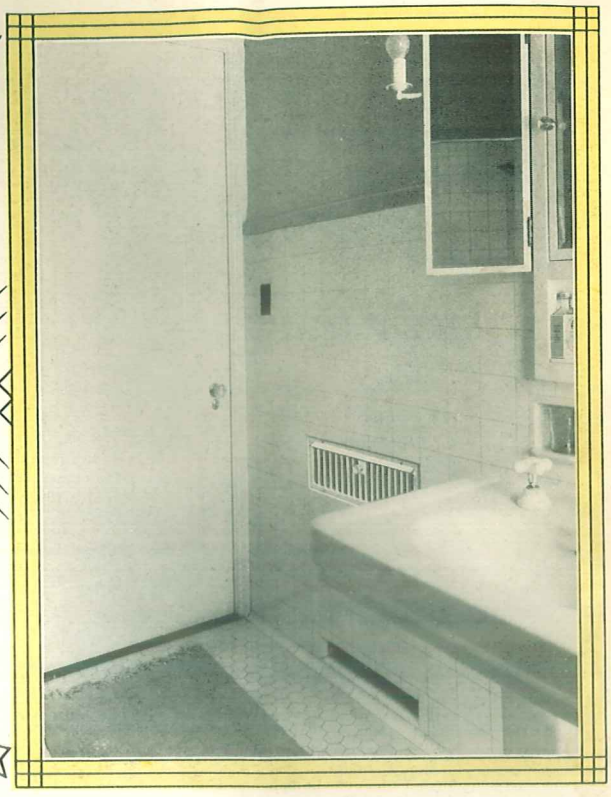


Four Steps of installation of Trane Heaters with plaster fronts in frame building

Attractive corner of living room showing Trane Convection Heater in the wall concealed with metal panel with grille at top and bottom



Trane Convection Bathroom Heater installed beneath the lavatory where it is inconspicuous and effective



In this bathroom, the Trane Convection Heater is concealed behind the tiling, where it takes no space from the room

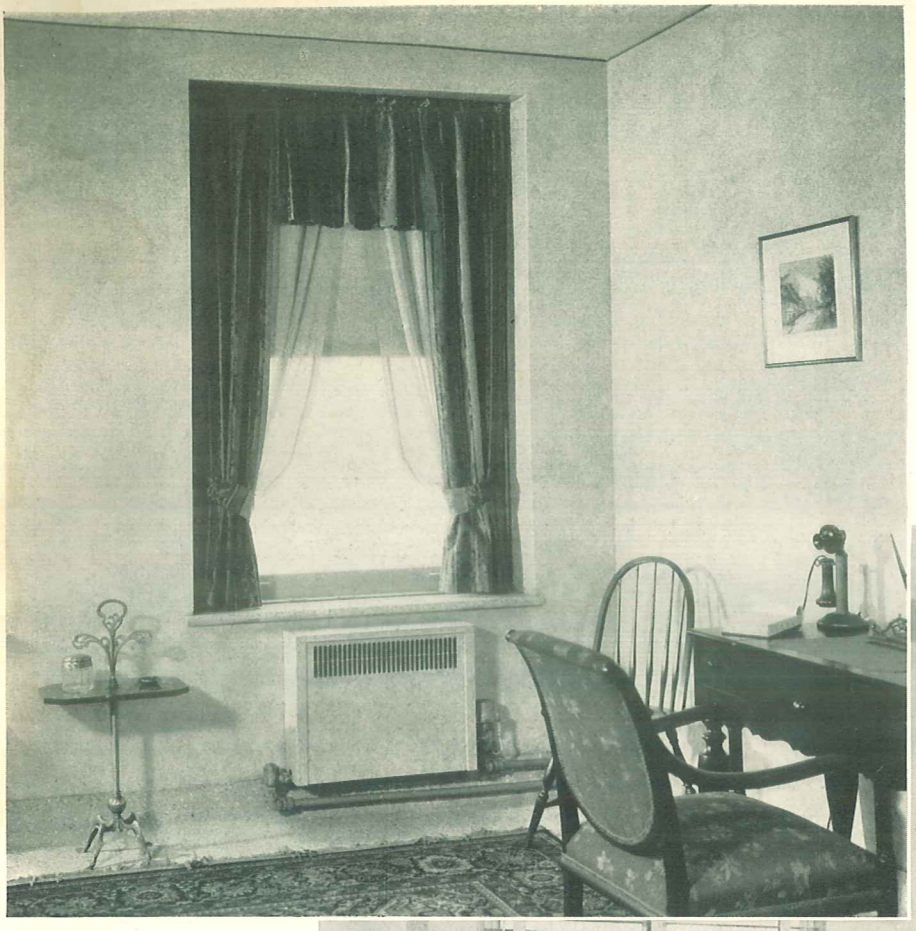
Economy of Trane Heaters

THROUGH Trane engineering and manufacturing development this marvelous concealed heating can now be obtained with first cost and operating cost that makes it absolutely unnecessary to even consider the installation of old-fashioned radiators.

The first costs of Trane Concealed Heaters are within the range of cast iron radiators, and installation economies make them lower in many cases. Some of these economies are less weight, which makes for easier handling, concentration of effective heating surface, requiring less wall space, ease of establishing temporary heat during construction, and lower cost of decorating.

Trane Heaters are made in sizes and types to fit any building design, and can be installed with slight changes in construction. Because of better distribution of heat, elimination of overheating the ceiling, instant control of heat, Trane Heaters save 15 to 25 per cent of fuel.

Trane Convection Heaters are truly an economy when compared to other methods.



Trane Convection Heater in wall hung cabinet below the window in this modern hospital

Trane Convection Heaters concealed in wall behind metal panels where they take nothing from the floor space of the room

Trane Convection Heater concealed in attractive floor cabinet which harmonizes with office furnishings

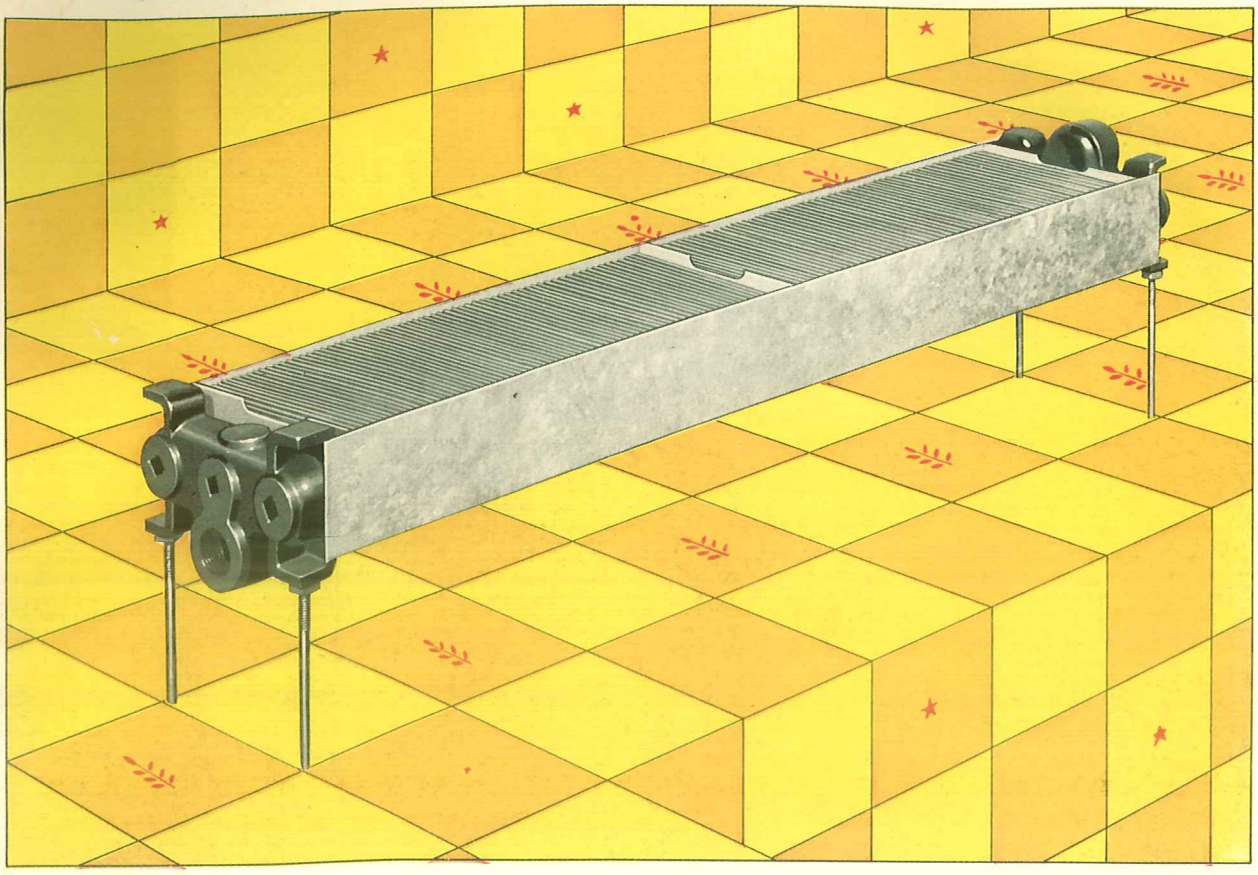
Trane Convection Heat for Commercial Buildings

AN increasing number of office buildings, apartment buildings, hotels, institutions, etc., are installing Trane Concealed Convection Heaters. Architects, builders and heating contractors have found that this type of heat costs no more to install, is more economical in operation and adds unusual beauty to interiors. Its cleanliness actually allows a great saving in redecorating and maintenance costs in the buildings.

For this type of installation, Trane Convection Heaters are available for every need. On these pages are shown three distinctive types of installation: (1) concealed in the wall; (2) in wall hung cabinets below windows; and (3) in attractive floor cabinets. All types of installation are, in cost, within the range of the old-fashioned radiator.

Trane Heaters are of considerable advantage in commercial as well as domestic installations because of their saving in floor space. Their use actually means a greater income for the building because of the added area made available by their use.

NATURAL AIR CIRCULATION WITH THE



The Trane Concealed Convection Heating Element

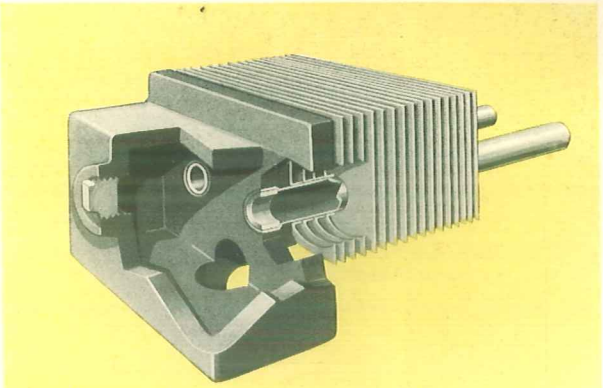
Facts About Trane Heaters

TRANE Convection Heaters can be used with any standard heating system—hot water, steam or vapor. In fact they can be used wherever the old-fashioned radiator may have been contemplated.

This new heater has made all other heating methods seem clumsy and out-of-date. It is not only a style development but also an engineering achievement of the first importance—a major victory in the unceasing battle to make your home or office more comfortable and more livable.

Don't confuse the heating effect of Trane Heaters with that of old-fashioned radiators or of other concealed equipment. Ingenious methods of design and manufacture have made the Trane Heater the outstanding development in its field. In the past few years, Trane Convection Heaters have won confidence of architects, heating engineers and building owners, typified by their increasing use in all types of buildings. In fact, wherever heat is necessary, the Trane method has made a name for itself through many years of actual use.

Design and Construction of Trane Heaters



Cutaway view showing construction of fins and tubes of Trane Convection Heater

AMONG the unseen parts of the Trane Concealed Heater which vitally affect the value of your investment and the success of your heating system, the patented Trane Heating Element far outweighs everything else in importance. This element consists of copper tubes and non-ferrous metal fins so joined, by a patented process, that there are no soldered or welded joints. The process in effect makes the fins an integral and permanent part of the tube and provides a much more perfect thermal contact than is possible with soldered or welded joints. The headers into which the heating tubes are rolled at each end are made of cast iron. The tubes are joined into the headers by the same process that is used on high pressure boilers, which insures a tight and permanent joint. It gives positive protection against leakage, and consequently you can be sure of continuous service throughout the life of your building. In fact, the Trane Heater is guaranteed to withstand pressures up to 150 pounds to the square inch, whereas heating systems are seldom operated at pressures above 5 pounds.

The heating element is mounted a few inches above the floor level in a sheet steel cabinet or enclosure, which connects the air inlet at the floor with the outlet grille. The entire outfit is placed in the walls. Over all it is only 3⅝, 5⅝ or 7⅝ inches wide respectively for concealment in the three types of walls most commonly used. Other widths are available for special construction and for use with visible cabinets.

The unique arrangement of the fins and patented process of joining tubes and fins gives the element such heating power that it replaces an ordinary radiator weighing twenty times as much. The complete heater assembly, in fact, weighs only about one-fifth as much as a radiator that has the same heating value.

Notable Installations of Trane Convection Heaters

HOSPITALS

Southern Pacific Hospital Bldg.
San Francisco, California

St. Elizabeth Hospital
Chicago, Ill.

Walter Reed Hospital
Washington, D. C.

St. Mary of Nazareth Hospital
Chicago, Ill.

Michigan State Hospital
Ypsilanti, Michigan

Mayo Clinic
Rochester, Minn.

St. Paul's Nurses' Home
Vancouver, B.C.

APARTMENT BUILDINGS

1001 Park Avenue
New York, N. Y.

Kuskin & Rotberg Apt.
East Orange, N. J.

Stikeleather Apt.
Asheville, N. C.

Apartment Hotel
Kansas City, Mo.

Frontenac Apts.
Pittsburgh, Pa.

Henderson Apts.
Portland, Ore.

No. 10 Gracie Square
New York, N. Y.

Goodman & Goodman Apt.
New York, N. Y.

No. 1 Beekman Place
New York, N. Y.

Mittleman Apt.
Portland, Oregon

No. 1 E. End Ave.
New York, N. Y.

SCHOOLS

Tuck House, Dartmouth College
Hanover, N. H.

Harvard University
Boston, Mass.

Massachusetts Inst. Tech.
Boston, Mass.

State Training School
Valley City, N. Dak.

William & Mary College
Williamsburg, Va.

Caswell School
Saskatoon, Sask.

School for Feeble-minded
Faribault, Minn.

Training School
State Teachers' College
Minot, N. Dak.

Radcliffe College
Cambridge, Mass.

Goucher College
Baltimore, Md.

Skidmore College
Saratoga, N. Y.

Ann Emery Hall, Univ. of Wisconsin
Madison, Wisconsin

HOTELS

Hotel Brownwood
Brownwood, Texas

Francis Hotel
Monroe, La.

Morrison Hotel
Chicago, Ill.

Roosevelt Hotel
Seattle, Wash.

Greenbrier Hotel
White Sulphur Spgs., Va.

Casa Del Mar
Atlantic Beach, L. I., N. Y.

Royal Pine Hotel
Pinewald, N. J.

Ford Airport Hotel
Dearborn, Mich.

OFFICE BUILDINGS

Banks Huntley Bldg.
Los Angeles, Calif.

Dulaney Bldg.
Ft. Worth, Texas

Doctors Building
Atlanta, Ga.

Newton Hall of Records
Newton, N. J.

New Haven Historical Society
New Haven, Conn.

Industrial Life Ins. Bldg.
Atlanta, Ga.

1616 Walnut St.
Philadelphia, Pa.

Lincoln Tower
Ft. Wayne, Ind.

Granite Trust Bldg.
Quincy, Mass.

New Central Young Men's Christian Ass'n Bldg.
Akron, Ohio

Canadian Nat'l Railway Co.
Boston, Mass.

Kidder-Peabody Co.
Boston, Mass.

RESIDENCES

Ben Hecht Residence
New York, N. Y.

F. W. Cortright Res.
Bryn Mawr, Pa.

W. S. Maddox Res.
Bryn Mawr, Pa.

E. L. King Res.
Daytona Beach, Fla.

Thomas Meighan Res.
New Port Richey, Fla.

J. Borden Harriman Res.
Washington, D. C.

Sec. Robt. Lamont Res.
Washington, D. C.

Col. Stimson Res.
Washington, D. C.

Jack Sharkey Res.
Newton, Mass.

Emil Leicht Res.
Winona, Minn.

Jos. E. Widener Res.
Palm Beach, Fla.

Harold S. Vanderbilt Res.
West Palm Beach, Fla.

F. J. Sensenbrenner Res.
Neenah, Wis.

Mary Roberts Rinehart

Trane Heating Service

THE Trane Company has branches and sales representatives throughout the United States and in Canada, England, Japan and China. Competent engineers are available to suggest the type of heating system best adapted to your home or other building, as well as to submit recommendations regarding the use of Trane equipment. As manufacturer of every necessary part of the heating system except boiler and piping, The Trane Company is interested first of all in seeing that you get a satisfactory system, rather than selling certain units of heating equipment. We guarantee that you will obtain satisfactory heating results if your heating plans are approved by Trane engineers.

When you deal with The Trane Company, you are obtaining the advice of one of America's oldest engineering organizations in the heating industry. Through a policy of constant improvement, Trane equipment is always in the forefront of progress.

TRANE U. S. BRANCHES

Office	Street Address
Akron, Ohio	405 Kling St.
Albany, N. Y.	47 Harris Ave.
Atlanta, Ga.	406 Southeastern Trust Bldg., Cor. Edgewood & Ivy Sts.
Baltimore, Md.	Long Bldg., 10 West Chase St.
Birmingham, Ala.	8010 First Ave.
Boston, Mass.	726 Little Bldg., 80 Boylston St.
Buffalo, N. Y.	624 Genesee Bldg.
Chicago, Ill.	1134 Palmolive Bldg., 919 N. Michigan Ave.
Cincinnati, Ohio	307 Bldg. Industries Bldg., 622 Broadway
Cleveland, Ohio	410 30th Bldg., 3030 Euclid Ave.
Columbus, Ohio	611 Joyce Bldg., 243 North High St.
Dallas, Texas	2710 Live Oak St.
Des Moines, Iowa	719 Hubbell Bldg.
Detroit, Mich.	210 First St.
Fort Worth, Texas	408 First Nat'l Bank Bldg.
Greensboro, N. Car.	1006 Jefferson Std. Bldg.
Indianapolis, Ind.	647 E. 11 St.
Juneau, Alaska	Juneau, Alaska
Kansas City, Mo.	Rm. 1, Reliance Bldg., 10th & McGee Sts.
Los Angeles, Calif.	Wright & Callender Bldg., 405 S. Hill Street
Louisville, Ky.	1207 Heyburn Bldg.
Memphis, Tenn.	515 Farnsworth Bldg.
Milwaukee, Wis.	Fine Arts Bldg., 125 E. Wells St.
Minneapolis, Minn.	210 S. 10th St.
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Portland, Ore.	351 E. Burnside St.
Rochester, N. Y.	81 So. Fitzhugh St., c/o Fitzhugh Hotel
Rockford, Ill.	928 N. Court St.
San Antonio, Texas	1118 Denver Blvd.
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Scranton, Pa.	Bliss-Davis Bldg., 148 Adams Ave.
Seattle, Wash.	532 First Ave., So.
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